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| 09/897,431 | 07/03/2001 | Takashi Eki | 31759-173641 | 8339 |

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| EXAMINER | |
|---|---|
| NELSON, FREDA ANN | |
| **ART UNIT** | **PAPER NUMBER** |
| 3639 | |

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/897,431 | EKI, TAKASHI | |
| | Examiner | Art Unit | |
| | Freda A. Nelson | 3639 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *28 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-3,5-7 and 9-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-7 and 9-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

The amendment received on October 28, 2005 is acknowledged and entered. Claims 1-3, 5-7, and 9-11 have been amended. Claims 4 and 8 have been canceled. No claims have been added. Claims 1-3, 5-7, and 9-11 are currently pending.

### *Response to Amendment and Arguments*

Applicant's arguments with respect to claims 1-3, 5-7, and 9-11 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections under 35 USC § 112 have been withdrawn due to the applicant's amendment.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1, 3-4, and 6, are rejected under 35 U.S.C. 103(a) as being unpatentable over Tse-Au (Patent Number 6,816,456) in view of Ebata et al. (Patent Number 6,708,209).

As for claims 1 and 3, Tse-Au discloses that the resource controller 202 can dynamically allocate a particular amount of network resources to the data traffic of the differing traffic classes (col. 5, lines 16-18). Tse-Au further discloses that the sole function of the parent node is to apportion bandwidth that is allocated to itself to dependent children nodes of the parent. The parent will know if A's siblings have "left-

over" bandwidth or not (col. 10, lines 40-47). Tse-Au still further discloses that the invention is a complete and cost-effective approach to provide differentiated quality of service for a network operator's critical traffic by traffic class priority (col. 1, lines 60-62). Tse-Au still further discloses that the resource managing device 116 may include a controller 202, a network interface 204, and a memory 206 (FIG. 2; col. 4, lines 60-61). Tse-Au still further discloses that by setting the bounded variable of a class to not bounded (F), the resource managing device 116 permits the data traffic and the corresponding class to use all additional bandwidth which is currently unused by another class or other classes; and unbounded means that a class of traffic can borrow unused bandwidth from other traffic classes through its immediate parent node (col. 10, lines 20-25).

Tse-Au does not disclose that the network resources provider charges a fee for the use of the basic network resources. Ebata discloses that the intra-organization resource allocation functional unit (300) also includes: a charging management unit (309) for performing necessary processing when fee charging occurs for the allocated resource; and a network configuration information updating unit (311) for periodically verifying and updating the contents of the network path information database (305a) and the resource allocation status database (306a) (col. 5, lines 29-44). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Tse-Au to include the feature of Ebata to provide a cost-effective approach to charging for differentiated quality of service for a network operator's critical traffic-by-traffic class priority.

As for claim 6, Tse-Au discloses that by setting the bounded variable of a class to not bounded (F), the resource managing device 116 permits the data traffic and the corresponding class to use all additional bandwidth which is currently unused by another class or other classes; and unbounded means that a class of traffic can borrow unused bandwidth from other traffic classes through its immediate parent node (col. 10, lines 20-25). Tse-Au still further discloses that by setting the bounded variable of a class to not bounded (F), the resource managing device 116 permits the data traffic and the corresponding class to use all additional bandwidth which is currently unused by another class or other classes; and unbounded means that a class of traffic can borrow unused bandwidth from other traffic classes through its immediate parent node (col. 10, lines 20-25)

In claim 7, Tse-Au discloses that the invention is a complete and cost-effective approach to provide differentiated quality of service for a network operator's critical traffic by traffic class priority (col. 1, lines 60-62). Tse-Au further discloses that the resource managing device 116 may include a controller 202, a network interface 204, and a memory 206 (FIG. 2; col. 4, lines 60-61). Tse-Au still further discloses that by setting the bounded variable of a class to not bounded (F), the resource managing device 116 permits the data traffic and the corresponding class to use all additional bandwidth which is currently unused by another class or other classes; and unbounded

means that a class of traffic can borrow unused bandwidth from other traffic classes through its immediate parent node (col. 10, lines 20-25).
Tse-Au does not disclose said optional condition being at least one of a preferential option at a premium rate and a non-preferential option at a discount rate, said preferential option enabling one information provider terminal to use a part of the basic network resources or its entirety thereof allotted to another information provider terminal. said non-preferential option enabling the other information provider terminal to use a part of the basic network resources or its entirety thereof allotted to said one information provider terminal. and said fee corresponding to said premium rate associated with said preferential option and said discount rate associated with said non-preferential option. Ebata discloses that the intra-organization resource allocation functional unit (300) also includes: a charging management unit (309) for performing necessary processing when fee charging occurs for the allocated resource; and a network configuration information updating unit (311) for periodically verifying and updating the contents of the network path information database (305a) and the resource allocation status database (306a) (col. 5, lines 29-44). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Tse-Au to include the feature of Ebata to provide a cost-effective approach to charging for differentiated quality of service for a network operator's critical traffic-by-traffic class priority.

In claim 10, Tse-Au discloses that the resource managing device may perform network resource monitoring and control functions of the local network 110 and additionally, the resource managing device 116 can monitor and control the bi-directional data traffic between the global network 112 and the local network 110 over the communication links 119 (col. 3, lines 41-49).

In claim 11, Tse-Au discloses that If, however, parent node B's "bounded" variable is "F", parent node B can then borrow from B's own sibling(s) through B's parent C (i.e., C would be A's grandparent) if the combined bandwidth demand of B's children nodes exceeded the bandwidth that B is allocated. In this way, an "unbounded" traffic class A can borrow bandwidth from other traffic classes in the tree, from the same branch or from other branches through its parent and/or ancestor nodes, all the way up to the root level of the tree, so long as each of the higher ancestors of A is also not bounded. Tse-Au further discloses that if any higher ancestors of A, say D, are bounded, then if A is unbounded, A can borrow up to the tree level of D. In other words, A can borrow from other descendants' traffic classes of D (that D can reach from a "downward" direction), but not any other "branches" that D cannot reach in a "downward" mode, e.g., D's sibling(s) and the associated tree branches of the sibling(s) (col. 10, lines 48-64).

2. Claims 2, 5, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Tse-Au (Patent Number 6,816,456) in view of Ebata et al. (Patent Number 6,708,209), in further view of Perlman et al. (Patent Number 5,978,381).

As for claims 2 and 5, Tse-Au does not disclose that the preferential option and said non-preferential option may be determined on the basis of a time zone. Perlman discloses that in the United States, residential local calls are generally charged at a flat-rate per month, regardless of duration and in other countries, local calls during off-peak hours are often cheaper than during peak hours. For example, in Japan, while local calls during peak hours are charged by the minute, a flat-rate service plan is available between the hours of 11 PM and 7 AM. Like the ISPs, phone companies must provide equipment and bandwidth to accommodate peak loads. During off-peak hours, this equipment and bandwidth sits idle, so the company may desire to incentive users to utilize the equipment during these hours (col. 6, lines 41-55). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Tse-Au to include the feature of Perlman et al. in order and charge for usage based on bandwidth usage during peak hours and non-peak hours across all time zones.

As for claim 9, Tse-Au does not disclose that the preferential option and said non-preferential option may be determined on the basis of a time zone. Perlman discloses that in the United States, residential local calls are generally charged at a flat-rate per month, regardless of duration and in other countries, local calls during off-peak hours are often cheaper than during peak hours. For example, in Japan, while local calls during peak hours are charged by the minute, a flat-rate service plan is available between the hours of 11 PM and 7 AM. Like the ISPs, phone companies must provide equipment and bandwidth to accommodate peak loads. During off-peak hours, this equipment and bandwidth sits idle, so the company may desire to incentive users to utilize the equipment during these hours (col. 6, lines 41-55). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Tse-Au to include the feature of Perlman et al. in order and charge for usage based on bandwidth usage during peak hours and non-peak hours across all time zones.

## *Conclusion*

3. The examiner has cited prior ad of interest, for example:

1) Nielsen (US PG Pub. 2001/0003830), which discloses a latency-reducing bandwidth-prioritization for network servers and clients.

2) Kirkby et al. (Patent Number 6,556,548), which disclose a method of allocating resources in a telecommunications network.

3) Rollins ( Patent Number 6,738,348), which disclose a bandwidth on demand subscriber system.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freda A. Nelson whose telephone number is (571) 272-7076. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on 571-272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FAN 01/07/2006

Freda Nelson

/Thomas A. Dixon/
THOMAS A. DIXON
PRIMARY EXAMINER